

REMARKS/ARGUMENTS

Claims 1-23 stand rejected in the outstanding Official Action. Claim 1 has been amended and therefore claims 1-23 remain in this application.

The Examiner's acknowledgment of Applicants' claim for foreign priority and the receipt of the certified copy of the priority document is very much appreciated. Additionally, the PTO's indication of acceptance of the previously filed formal drawings is appreciated. Finally, the Examiner's consideration of the previously filed Information Disclosure Statement is very much appreciated.

Claims 1-6, 9, 11-13, 16, 17 and 19-21 stand rejected under 35 USC §102 as anticipated by McGlade (U.S. Patent 4,806,760).

Applicants have amended independent claim 1 to add a specific recitation of the electrical oscillator for driving the resonator element into resonance and the mounting means for mounting the supporting frame on a substrate and for providing thermal insulation between the substrate and the supporting frame. The antecedent basis for the "electrical oscillator" for driving the resonant element into resonance is found in Applicants' specification as originally filed between lines 25 and 28 of page 7 and elsewhere in the specification. The mounting means providing thermal isolation between the substrate and the supporting element and for mounting the supporting frame on a substrate is contained on page 5, lines 24-28 and elsewhere in the specification.

Claim 1 has also been amended to confirm that the supporting frame is adapted to absorb infrared radiation received by the device thereby altering a resonant property of the resonator element. Support for this feature is included on page 3, lines 13-16, page 7, lines 15-23 and

elsewhere in the specification. As a result, claim 1 is somewhat more limited than the claim 1 discussed in section 5 of the Official Action.

With respect to claim 1 and the cited prior art reference of McGlade, it is noted that McGlade (1) does not have any electrical oscillator for driving the resonator into resonance, (2) does not have any mounting structure for thermally isolating the support from a substrate and (3) does not have a device in which the resonant property of the resonator element is altered by infrared radiation received by the supporting frame. Accordingly, because McGlade does not disclose these features, McGlade cannot anticipate claim 1 or any claims dependent thereon and therefore any further rejection of these claims under 35 USC §102 is respectfully traversed.

Should the Examiner contend that the above noted claimed structures and claimed interrelationships between structures are disclosed in McGlade, she is respectfully requested to identify the locations of all teachings of such structures in the McGlade reference. The failure to identify such disclosures in McGlade will be taken as an admission that McGlade contains no such teachings.

Claims 1, 7-10 and 13-15 stand rejected under 35 USC §102 as anticipated by Burns ("Resonant Microbeam Sensors"). Burns does not appear to disclose the supporting frame having thermal isolation between it and the substrate. Should the Examiner contend otherwise, she is again requested to specifically indicate where such teaching exists in Burns and the failure to indicate will be taken as an admission that the alleged teaching does not in fact exist.

Additionally, while the interrelationship of elements disclosed in Burns would be suitable for temperature measurement, it would not be suitable for detecting infrared radiation as set out

in Applicants' claimed invention so there would be no reason to attempt to modify Burns in the manner of the present claims.

Furthermore, the devices disclosed in Burns all have covers over the thermally active region and the cover is needed to ensure a vacuum can be maintained. The Examiner has admitted in paragraph 22 of the official action that "silicon absorbs infrared radiation." Therefore, because Burns requires a roof formed from polysilicon (in order to maintain his vacuum), this roof would be detrimental to the sensitivity of the device for the detecting of IR radiation as opposed to merely detecting overall structure temperature changes. In fact, if it is designed to detect temperature changes, those of ordinary skill in the art would not wish to have thermal insulation between the substrate and the supporting frame, as this would make it less susceptible to temperature variations.

In view of the above, there is simply no disclosure in the Burns reference of the recited elements and their claimed interrelationship as set out in claim 1 and any further rejection of claim 1 (or claims dependent thereon) over the Burns reference as being anticipatory under 35 USC §102 is respectfully traversed.

Claims 16, 18 and 23 stand rejected under 35 USC §103 as being obvious over Burns as previously applied and further in view of Zhao ("Optomechanical Uncooled Infrared Imaging System: Design, Microfabrication, and Performance"). Inasmuch as claims 16, 18 and 23 all depend from independent claim 1, the above comments regarding the Burns reference are herein incorporated by reference. As there is no allegation that the Zhao reference discloses the claimed structures which, as noted above, are missing from the Burns reference, any further rejection of these claims over the Burns/Zhao combination is respectfully traversed.

Claim 22 stands rejected under 35 USC §103 as unpatentable over McGlade. Inasmuch as claim 22 depends from claim 1, the above comments regarding claim 1 distinguishing over the McGlade reference are herein incorporated by reference. There is simply no basis for allegation that McGlade teaches the subject matter of Applicants' amended claim 1, let alone claim 22, and therefore any further rejection thereof is respectfully traversed.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that remaining claims 1-23 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, she is respectfully requested to contact Applicants' undersigned representative.

Respectfully submitted,

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